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1 Introduction

In this paper, I present new data from Bulgarian (BG), and discuss its relevance for the structure of the left periphery. While the phenomenon of multiple wh-fronting (MWF) is well-known except for the new facts on the penetrability of the wh-cluster in BG, multiple topicalization (MT) has not been discussed before. The interaction between MWF and MT will be shown to have important consequences for the representation of topic and focus in the structure as well as for the syntax phonology interface.

Topics in BG front to the beginning of the clause as shown in (1). Furthermore, they must precede focused phrases (2).¹ These facts prompted Rudin (1986) to propose the structure in (3), whereby topics are adjoined to CP and focused phrases are adjoined to IP:

- (1) Decata mama šte vodi na cirk.
 kids-the (top) mom will take to circus
 "The kids, mom will take to the circus."
- (2) a. Decata MAMA šte vodi na cirk.
 movie-the (top) mom (foc) will take to circus
 b. *MAMA decata šte vodi na cirk.
 "The kids, MOM will take to the circus."
- (3) [S'/CP TOPIC [S'/CP COMP [S/IP FOCUS [S/IP ...]]]]

In what follows I will argue that this cannot be the correct structure. The evidence comes from the penetrability of the wh-cluster.

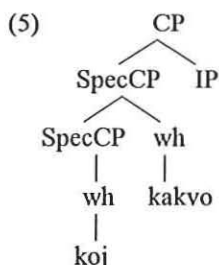
* Portions of this material were presented at the University of Connecticut, FASL 8, and PLC 25. I thank the audiences of these forums for their comments. The guidance and criticism of my advisor, Željko Bošković, and Howard Lasnik are acknowledged with gratitude. Of course, they are not responsible for any remaining errors.

¹ Topicalized phrases are underlined and focused phrases appear in CAPITALS.

2 Bošković's Economy/Focus Movement account

BG is a MWF language, i.e. it does not allow for any *wh*-phrase to remain in situ (4). In her seminal paper on MWF, Rudin (1988) proposes that in BG all fronted *wh*-phrases are in SpecCP, right-adjoined to each other:

- (4) a. **Koj iska kakvo?* (on true question reading)
 who want-PRES.3P.SG what
 b. *Koj kakvo iska?*
 "Who wants what"



She provides several arguments for the structure in (5). Rudin is particularly concerned with Superiority effects in BG:

- (6) a. *Koj kakvo iska?*
 who what want-PRES.3P.SG
 b. **Kakvo koj iska?*

Rudin's analysis of these facts is based on the split ECP hypothesis (Aoun, et al., 1987), the details of which are not immediately relevant. Importantly, as shown by Bošković (1997) BG exhibits Superiority effects selectively:

- (7) a. *Kakvo na kogo e podaril?*
 what to whom AUX.PRES.3P.SG given-as-a-present
 b. **Na kogo kakvo e podaril?*
 "What did s/he give to whom as a present?"
- (8) a. *Koj kakvo na kogo e podaril?*
 who what to whom AUX.PRES.3P.SG given-as-a-present
 b. *Koj na kogo kakvo e podaril?*

"Who gave what to whom as a present?"

Thus the ordering restriction in (7), which mirrors that of (6), doesn't hold for the same two objects in (8) in a construction with three wh-phrases.

Bošković (1997) proposes a convincing analysis. The central claim is that MWF is an epiphenomenon which consists of the more familiar wh-movement for one wh-phrase and focus movement for all wh-phrases. The reasoning behind his proposal is simple: it should suffice for one wh-phrase to satisfy the inadequacy of C. The rest of the wh-phrases move for an independent reason assumed to be the checking of a focus feature. The idea belongs to Stjepanović (1995/1998) who suggests that Serbo-Croatian wh-phrases undergo focus movement because they are inherently focused following Rochemont's (1986) and Horvath's (1986) work on other languages.

The account is instantiated in terms of Attract/Move: the strong wh-feature is located in C but the strong focus feature resides in the moved elements. The facts in (6a) receive the following analysis:

(9) *Attract/Move*

- a. [CP C [IP ... WH WH WH ...
 +wh, strong +wh, weak +wh, weak +wh, weak
 +Foc, weak +Foc, strong +Foc, strong +Foc, strong
 b. [CP *Koji kakvoj iska* [VP *koji iska kakvoji*]]

As a result, the highest wh-phrase is attracted to satisfy the inadequacy of C in the most economical way. The rest of the wh-phrases adjoin to it as proposed by Rudin.

An important corollary concerns multiple feature checking: in the following configuration, the order of movement to z is free:

(10) [z [x y]]

Bošković derives this from Economy. Regardless of whether x and y move to z in a x, y or y, x order, the movement is equally economical since the same number of nodes are crossed. Thus, concerning (8), the order of movement to C--*kakvo* "what" *na kogo* "to whom", or *na kogo* "to whom" *kakvo* "what"--does not matter for Economy:

- (11) a. [SpecCP [[[Koji] kakvoj] na kogo_k] e podaril [t_i t_j t_k]]
 b. [SpecCP [[[Koji] na kogo_k] kogo_j] e podaril [t_i t_j t_k]]

To clarify, in BG we see this for the second and third wh-phrase only

because C has a strong wh-feature which is responsible for attracting *koj* "who" first.

3 The Penetrability of the Wh-Cluster

Rudin (1988) also argues that the fronted wh-phrases in BG form a syntactic constituent which she uses as supporting evidence for her claim that they are all in SpecCP. Presumably, lexical material cannot break the wh-cluster:

- (12) a. (√) **Koj, spored tebe, kakvo pie?*
 who according-to you what drink-PRES.3P.SG
 "Who, according to you, is drinking what?"
- b. (√) **Koj prâv kogo e udaril?*²
 who first whom AUX.PRES.3P.SG hit
 "Who hit whom first?"

3.1 Constituency

Bošković (1998a:2) notes in passing some speaker variation concerning the penetrability of the wh-cluster which, I claim, is the standard case, especially with contrastively focused material. Below I show that adjuncts of various types--particles, parentheticals, and adverbs--can intervene in the wh-cluster:

- (13) *Koj, pâk, kakvo iska ot tebe?*
 who emph.part. what want-PRES.3P.SG from you
 "Who, for god's sake, wants what from you?"
- (14) a. *Koj, spored tebe, kakvo pie?*
 who according-to you what drink-PRES.3P.SG
- b. *Koj prâv kogo e udaril?*
 who first whom AUX.PRES.3P.SG hit

² Rudin's (1988:467; ex.[42b]) original example is an indirect question. I changed it to have a minimal pair:

- (i) **Zavisi ot tova koj prâv kogo e udaril?*
 depends on this who first whom AUX.PRES.3P.SG hit

- (15) a. sentential adverbs
 Koj **sigurno** kakvo e kupil?
 who probably what AUX.PRES.3P.SG bought
 "Who has probably bought what?"
- b. ambiguous adverbs (sentential/manner readings)
 Koj **umelo** kakvo e prikril?
 who cleverly what AUX.PRES.3P.SG hidden
 "Who has cleverly hidden what?"
- c. manner adverbs
 Koj **grozno** kakvo e bojadisal?
 who ugly what AUX.PRES.3P.SG painted
 "Who has painted what ugly?"

The examples in (14) are Rudin's. All my informants and I, as a native speaker, find these perfect. From the data in (13) through (15) I conclude that fronted wh-phrases in BG do not form a constituent.

The penetrability facts appear problematic for Bošković who follows Rudin in assuming that fronted wh-phrases form a constituent in SpecCP. But I show below that they can be accommodated on a minor modification.

I propose that C is not the focus licenser in BG as Bošković suggests. Instead, focus is licensed below it. His Attract/Move analysis then can be restated as Attract/Move plus Excorporation. In particular, all wh-phrases move first to ΔP , the projection C takes as a complement. There they right-adjoin to each other in Spec ΔP . Given the Superiority effects, I have to assume that the Δ head has a strong focus feature as well.

After movement to ΔP , the highest wh-phrase excorporates to check the strong wh-feature of C. I follow Watanabe (1993) assuming that Economy forces movement to carry as little material as possible. Therefore, moving *koj* "who" alone is more economical than moving the whole cluster.³

³ I am extending here the notion from head clusters to adjoined structures in general.

- (19) a. *Koj, navjarno, kâde koga šte porââa tortata?*
 who perhaps where when will order cake-the
 b. **Koj kâde, navjarno, koga šte porââa tortata?*
 who where perhaps when will order cake-the
 c. **Koj koga, navjarno, kâde šte porââa tortata?*
 who when perhaps where will order cake-the
 ‘‘Who will perhaps have the cake made where and when?’’

The reason is that the first wh-phrase is in a separate projection. This fact provides additional evidence for the proposed modification.

3.2 Topics in Wh-Questions

Now consider slightly more complicated data. Topics can occur in wh-questions, and in such cases they precede the fronted wh-phrase(s):

- (20) *Decata koj šte vodi na cirk.*
 kids-the (top) who will take to circus
 ‘‘The kids, who will take to the circus.’’

The ordering restriction mirrors that for topics and a focused phrase shown in (2). Since the wh-phrase first undergoes non-wh-fronting/focus movement and subsequently wh-movement Rudin’s (1986) proposal that topics are adjoined to CP (3) seems plausible. However, there is evidence that it does not work.

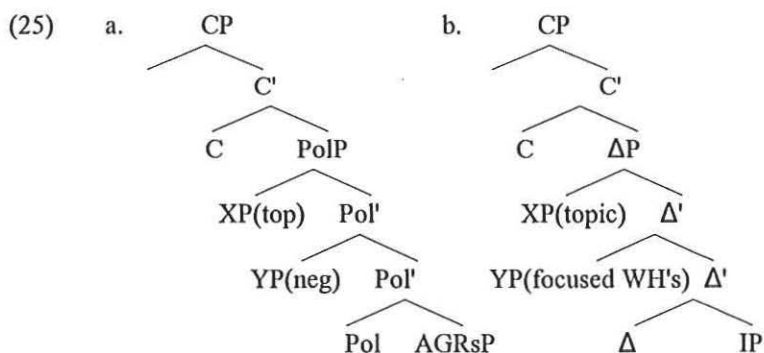
It has not been noticed before that the wh-cluster cannot be broken in the presence of a topic. If Rudin were correct, the pattern of the penetrability of the wh-cluster, shown schematically below (the dots indicate where intervening lexical material may appear) would remain a mystery:

- (21) a. $\sqrt{\text{wh}_1 \dots \text{wh}_2 (\text{wh}_3)}$
 b. **Topic wh₁ ... wh₂ (wh₃)*

In (22) through (24) I illustrate this generalization with actual examples. The judgments are robust.

- (22) a. Koj pone kâde e zavel decata?
 who at-least where AUX.PRES.3P.SG taken kids-the
 "Who has, at least, taken the kids where?"
 b. *Decata, koj pone kâde e zavel?
 kids-the (top) who at-least where AUX.PRES.3P.SG taken
 "Decata, who has at least taken where?"
- (23) a. Kakvo, kazvaš, koga iska šefât?
 what you-are-saying when want-PRES.3P.SG boss-the
 b. *efât, kakvo kazvaš koga iska?
 boss-the (top) what you-are-saying when want-PRES.3P.SG
 "The boss, you're saying, what does he want when?"
- (24) a. Koj, verovatno, kak e saupil?
 who probably how AUX.PRES.3P.SG broken
 b. *Vazata, koj verovatno kak e saupil?
 vase-the (top) who probably how AUX.PRES.3P.SG broken
 "The vase, who's probably broken it how?"

In related work, I have suggested that topics in BG are below C, licensed by the same head that licenses focus (25b). The idea is due to Koizumi's (1994) analysis of English negative preposing (25a):



The structure in (25a) captures the fact that negative preposing in English can occur in the presence of a topic:

- (26) He said that [beans] [never in his life] had he liked.

It is easy to see that the structure proposed in (25b) is relevant to the observed ordering restrictions for a topic and a focused phrase (27a). As far as wh-questions are concerned, given that C has a strong wh-feature and requires a wh-phrase in SpecCP, we might expect a topic to intervene between the two wh-phrases (27b), contrary to fact:


- (27) a. Decata MAMA šte vodi na cirk. =(2a)
 movie-the (top) mom (foc) will take to circus
 b. *Koj decata kâde šte vodi?
 who kids-the (top) where will take


What we see instead is that the topic precedes the two wh-phrases (28a). I propose that *koj* 'who' is indeed in SpecCP but some additional considerations force the pronunciation of its lower copy in Spec ΔP:

- (28) a. Decata koj kâde šte vodi?
 kids-the (top) who where will take
 b. [_{SpecCP} koj [C [_{SpecDP} decata [_{SpecDP} [[koj] kâde] [Δ
 [_{SpecIP} koj [I šte vodi [_{VP} koj šte-vodi decata kâde]]]]]]]]


Franks (1998) and Bošković (2001) argue that what normally gets pronounced is heads of non-trivial chains but lower copies of movement can be pronounced instead to save a derivation from a PF violation. Thus, in (22a)-(24a) the head copy in SpecCP is pronounced and lexical material can follow the first wh-phrase. Nothing can intervene further down in the cluster since the wh-phrases form a constituent in SpecΔP. In (28) a lower copy of the first wh-phrase is activated, namely the one in SpecΔP. It is for this reason that the wh-cluster cannot be broken.

The relevant phonological violation is intonational clash. Let me show why. Penchev (1978) notes that BG has two intonational contours--a neutral one which involves a gradual fall, and a marked one which involves a fall followed by a rise-fall. Statements and questions are both pronounced on the neutral contour:



- (29) Statements and/or questions:
 a. Ivan speãeli konkursa. (*statement: medium fall, neutral*)
 Ivan win-PT.3PSG competition-the
 'Ivan has won the competition.' 

- b. Koj speãeli konkursa? (*question: high fall, neutral*)
 who win-PT.3P.SG competition-the
 "Who has won the competition?"
- 

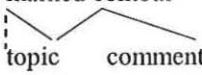
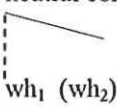

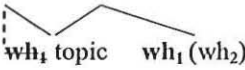
The only difference is that questions require a high fall since a question word is known to attract a high tone. While direct questions are pronounced on the neutral intonational contour indirect questions require the marked one because a *wh*-word shows up inside the clause:

- (30) Indirect Questions: (*medium fall followed by a rise-fall, marked*)
 Ivan pita koj speãeli konkursa?
 Ivan ask-PRES.3P.SG who win-PT.3P.SG competition-the
 "Ivan is asking who won the competition?"
- 

Topics are followed by a sharp fall and delimited by a perceptible pause, the comment being pronounced on the rise-fall of the marked contour. The same is true for a question with a topic.

- (31) Topics (w/ Question): (*medium fall followed by a rise-fall, marked*)
 a. Konkursa Ivan speãeli.
 competition-the (top) Ivan win-PT.3P.SG
 "The competition, Ivan has won it."
- 
- b. Konkursa koj speãeli?
 competition-the (top) who win-PT.3PSG
 "The competition, who has won it?"
- 

Note the conflicting intonational requirements when a topic immediately follows a *wh*-phrase (31b). Recall that *koj* "who" is in SpecCP and wants a high tone on a gradual fall while the topic wants a sharp fall followed by a rise-fall somewhere on the way breaking up the gradual fall. Crude as this generalization may be, it is clear that neither of the existing contours can accommodate these requirements without changes. The clash, which I represent graphically in (32c), can be only resolved on the marked contour but that necessitates that all *wh*-phrase(s) be pronounced on the rise of the rise-fall:

- (32) a. marked contour

 b. neutral contour

 c. 
 d. 

I claim this is exactly what happens. The impenetrability of the cluster now follows since in Spec Δ P the wh-phrases form a constituent.

So far I have argued that topic and focus in BG are licensed in the same projection. In particular, I have shown that topics cannot be adjoined to CP since they do affect the penetrability of the wh-cluster.

4 Multiple Topicalization: (Anti-)Superiority

To the best of my knowledge, MT has not been discussed previously in the literature. BG not only allows multiple topics but the phenomenon exhibits properties similar to MWF.

First, BG topics front obligatorily to the beginning of a clause (33). In the case of multiple topics, they all have to front (34). The bad sentences are not acceptable on the relevant interpretation:

- (33) a. Decata mama šte vodi na cirk.
 kids-the (top) mom will take to circus
 b. *Mama šte vodi decata na cirk.
 mom will take kids-the (top) to circus
 "The kids, mom will take to the circus."
 (34) a. Mama decata šte vodi na cirk.
 mom (top) kids-the (top) will take to circus
 b. *Mama šte vodi decata na cirk.
 mom (top) will take kids-the (top) to circus
 "As for mom and the kids, she will take them to the circus."

Second, moved topics give rise to Superiority effects which I show in (35). As with MWF, Superiority effects are not rigid: compare (36) and (37)

- (35) a. [Mama]₁ [decata]₂ t₁ šte vodi t₂ na cirk.

- mom (top) kids-the (top) will take to circus
 b. *Decata mama šte vodi na cirk.
- (36) a. Decata na cirk mama šte vodi.
 kids-the (top) to-circus (top) mom will take
 b. *Na cirk decata mama šte vodi.
 to-circus (top) kids-the (top) mom will take
 "The kids to the circus, mom will take."
- (37) a. Mama decata na cirk šte vodi.
 mom (top) kids-the (top) to-circus (top) will take
 b. Mama na cirk decata šte vodi.
 mom (top) to-circus (top) the kids (top) will take
 "As for mom, the kids and the circus, she will take them there."

I find this parallelism between the two phenomena rather strong supporting evidence for my hypothesis that topics and focus are licensed in the same projection. Therefore, I propose to extend the Attract/Move analysis to topicalization in BG. The attracting head has a strong topic feature, and so do all topic phrases. Once again, appealing to Bošković's Economy condition I can derive the selective Superiority effects:

- (38) *Attract/Move*
 Δ TOP-phrase₁ TOP-phrase₂ TOP-phrase₃
 +Top, strong +Top, strong +Top, strong +Top, strong
- (39) a. [Δ P mama_i [Δ ... [t_i t_j t_k]]]
 |
 mama_i decata_j
 |
 mama_i [na cirk]_k
 |
 b. [Δ P mama_i [Δ ... [t_i t_j t_k]]]
 |
 mama_i [na cirk]_k
 |
 mama_i decata_j

Furthermore, multiple topics appear to form a cluster in Spec Δ P since nothing can intervene:

- (40) *Decata, kazvaš, na cirk mama šte vodi.
 kids-the (top) you-are-saying to-circus (top) mom will take
 "The kids, you're saying, to the circus mom will take."

This is yet another property MT and MWF share. Recall that lexical material can follow only the first wh-phrase, and only in the absence of a topic. That is so because the relevant wh-phrase is in a separate projection. But when the wh-cluster has to be pronounced in ΔP it cannot be broken similarly to the topic cluster. I assume both clusters involve right adjunction, but they are in two separate specifiers.

Multiple topics are also possible in questions, and furthermore nothing precludes them in multiple wh-questions, as expected on my analysis:

- (41) a. Decata na cirk koj šte vodi?
 kids-the (top) to-circus (top) who will take
 "The kids to the circus who will take?"
 b. Decata na cirk koj koga šte vodi?
 kids-the (top) to-circus (top) who when will take
 "The kids to the circus, who will take when?"

5 The Structure of the Left Periphery

5.1 Uriagereka's Point-of-View Functional Projection

The motivation behind my proposal that topic and focus are licensed in the same projection is entirely empirical. A possible objection concerns the simultaneous licensing of apparently contradictory features--topic is old information while focus is new information. The conceptual oddness, however, disappears if topic and focus are viewed as discourse-related, hence the label *delta* (ΔP) for the projection in question.

Uriagereka (1995a) has made the theoretical claim explicitly: discourse-related matters do not carry enough conceptual weight to justify a level of representation of their own. He proposes that a single universal projection encodes syntactically matters of topic, focus, emphasis, contrast, etc., all of which have an aspect of common: they encode the *point of view* of a speaker or some other subject. For him, suggestive evidence comes from languages with overt focalization strategies. I will add that the BG facts discussed above provide full support for this hypothesis.


How do these facts alter the perspective on the left periphery? I would say that we need to look more closely to what extent it is possible to find further evidence for encoding discourse information in a single projection before rushing to posit multiple projections (cf. Rizzi, 1997). At least Minimalist aspirations force such a conclusion.

I have assumed that the fronted topic(s) and wh-phrase(s) target two separate specifiers. Nothing in my analysis ensures that topics will land in the higher specifier. That is a problem I inherit from Koizumi (1994).

5.2 The Order of the Fronted Topics and Foci

Multiple feature checking whereby the attracting head has two strong features plausibly results in a multiple specifiers structure. However, syntax does not have to be responsible for determining what kind of phrase will land in the higher specifier. In other words, I suggest that the order of movement is free, contra Richards (1997).

So far I have assumed, rather stipulatively, that topics land in the higher specifier. The reason is that topics surface before focused/wh-phrases as can be seen in (2) and (20). Suppose that the order of movement is indeed free, then for (42), both derivations in (43) are syntactically well-formed. I suggest that intonational requirements rule out the derivation on which the topic is in the lower specifier:

- (42) Decata MAMA šte vodi na cirk. = (2a)
 movie-the (top) mom (foc) will take to circus
 "The kids, MOM will take to the circus." 
- (43) a. [_{SpecDP} Decata [_{SpecDP} MAMA šte vodi [_{VP} MAMA šte vodi
 decata na cirk]]]
 b. * [_{SpecDP} MAMA [_{SpecDP} Decata šte vodi [_{VP} MAMA šte vodi
 decata na cirk]]]

A contrastively focused phrase requires a high tone. Recall that a topic is delimited by the initial fall of the marked contour. In (43a) the focused phrase is pronounced on the rise of the following rise-fall. However, (43b) is ruled out by the intonation clash in (32c). The same holds true for the ordering of topic(s) and wh-phrase(s) within ΔP . This is yet another piece of evidence for the pronunciation of lower copies.

6 Conclusions

I have investigated MT and presented new evidence concerning the penetrability of the wh-cluster in BG. These facts have been shown to support overwhelmingly Bošković's focus/wh-movement account of MWF in BG on a minor modification. I have also argued that topic and focus in BG are licensed in the same syntactic projection, as suggested by Uriagereka. The proposed account of the interaction of topicalization and focalization provides further evidence for Franks' and Bošković's pronounce-a-copy analysis.

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